

Buckskin National Mine Site
East Slope of Buckskin Mountain
Paradise Valley Vicinity
Humboldt County
Nevada

HAER
NEV
7-PAVA.V,
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Western Region
Department of the Interior
San Francisco, California 94107

**HISTORIC AMERICAN ENGINEERING RECORD
BUCKSKIN NATIONAL MINE SITE**

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HAER No. NV-17

Location: The eastern flank of Buckskin Mountain summit in the Santa Rosa Range of the Humboldt National Forest. Access is via forest road 084 to Windy Gap, about twenty four miles north of the community of Paradise Valley, and by dirt road for approximately two miles.

U.S.G.S. 7.5' Buckskin Mountain (Nevada) Quadrangle,
Universal Transverse Mercator Coordinates:

Northeast Corner 11.455180.4627220
Northwest Corner 11.454330.4626510
Southwest Corner 11.455200.4625470
Southeast Corner 11.456800.4646350

Date of Construction: Lucky Tiger Mill 1923-31

Engineer: Unknown.

Builder: Various, discussed under historic context.

Present Owner: Humboldt-Toiyabe National Forest
2035 Last Chance Road
Elko, Nevada 89801

Present Use: Vacant.

Significance: The Buckskin National Mine is strongly associated with the National Mining District as its most productive mine in the 1920s and 1930s. It is associated with William Bell, a two-term Nevada State Senator from Humboldt County and a prominent local figure. Buckskin National Mine is a source of archaeological information needed to answer scientific and scholarly research questions about the National Mining District community, miner's living

conditions and lifestyles, women on the mining frontier, consumerism, and mining technology.

**Report Prepared
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I. DESCRIPTION

The Buckskin National Mine site (Figures 1-5) (HAER No. NV-17, Photograph 1) lies on the eastern side of the summit of Buckskin Mountain in the Santa Rosa Range of northcentral Nevada. From the summit, it extends down the slope and along the upper reaches of the North Fork of the Little Humboldt River. Hardrock gold and mercury mining took place at the site between the 1890s and the present, with the most intense period of activity in the 1920s and 1930s. The mine site includes the Nevada Lucky Tiger Mill complex (HAER No. NV-18), the McCormick Group mine complex (HAER No. NV-19, and the Bell family residence complex (HAER No. NV-20).

The Nevada Lucky Tiger Mill Complex (HAER No. NV-18, Photographs 1-16)

The complex includes the Hatch adit, an extensive residential complex with some standing structures, and the remains of the Nevada Lucky Tiger Mill, a fifty ton cyanide plant with a ten-ton flotation and washing plant operated between 1935 and 1937 (Figure 6). Architectural and engineering features in the complex include the mill and mine office, water tanks, an assay office, dining hall, family residence, stable, dugout, water pump, hoist, mill, and adit. In addition, the complex includes several archaeological features and isolated objects from machinery or other equipment. Landscape features include extensive mill tailings, roads, pathways, erosion channels, and sagebrush.

Office (Feature B-1) (HAER No. NV-18-A, Photographs 1-2, Figure 7)

The office is a standing, frame building with a low-arched roof. An addition on the north side, possibly a kitchen due to the presence of plumbing, has collapsed and most of the interior and exterior wall boards are missing. Only a few domestic artifacts were found in association with this structure.

Water Tanks (Feature B-2) (HAER No. NV-18-B, Photographs 1-3)

Two large steel tanks and associated fittings in the complex presumably held water for the mill.

Assay Office (Feature B-4) (HAER No. NV-18-C, Photograph 1, Figure 8)

The assay office is a standing wooden frame structure. The building has a cement floor that extends outside the building on the south end where it supports a concrete pedestal for mounting a piece of equipment no longer present. Artifacts associated with this structure are in keeping with an assay office.

Dining Hall (Feature B-7) (HAER No. NV-18-D, Photograph 1, Figure 9)

The dining hall consist of two collapsed buildings, a collapsed dugout cellar, and a foundation or retaining wall.

Family Residence (Feature B-10) (HAER No. NV-18-E, Photograph 1, Figure 10)

The family residence is a standing, four-room, wooden frame structure with a low-arched roof. In one of its interior rooms, the house appears to have had a home-made shower consisting of a small room, lined with tar paper and a drain in the floor. There is very little domestic refuse in the vicinity of this structure.

Stable (Feature B-14) (HAER No. NV-18-F, Photograph 1)

The stable is constructed with a frame of widely spaced "four-by-four" timbers and a corrugated steel exterior.

Dugout (Feature B-16) (HAER No. NV-18-G, Photograph 1)

The dugout is a very sturdily built dugout structure of heavy wood planking with a gravel covered roof. Inside the structure are two, "home-made" devices constructed of steel drums and pipes, with what appears to

be an agitation device in one. The function of this structure and the devices is not apparent.

Water Pump (Feature B-25) (HAER No. NV-18-H, Photographs 1-2)

The water pump includes a three cylinder water pump, an electrical motor, and a standing power pole. The motor has been disassembled, but the pump is intact.

Hoist (Feature B-26) (HAER No. NV-18-I, Photographs 1-2)

The hoist is a steam-powered winch adjacent to the Hatch adit used in the operation of the mine. Although the shaft of the cable winding drum has been blocked up, out of its bearings, the entire apparatus seems to be intact.

Mill (Feature B-27) (HAER No. NV-18-J, Photographs 1-4, Figures 11-12)

The remains of the Nevada Lucky Tiger Mill include much of the equipment in, or near, its original location. In addition to steel thickening tanks, there is a rod mill, a trommel, power transfer shafts, belt clutches, a variety of pumps and valves, and numerous parts from other pieces of equipment. Because of the slope, soil has slid down and covered some portions of the mill. Other pieces of equipment may remain under this soil. Since its location was not ascertained, one such piece of equipment might be the engine used to power the mill. The tailings from the mill, which have been heavily eroded with drainage water from the Hatch adit, extend from the mill foundation downslope and eastward into the North Fork of the Humboldt River.

Hatch Adit (Feature B-28) (HAER No. NV-18-K, Photographs 1-2)

The Hatch adit is located on the upper side of the Nevada Lucky Tiger mill foundations. Adjacent to the adit are portions of two concrete walls, built into the slope. The functions of these walls is not obvious.

Isolated Objects and Archaeological Features (Features B-3, 5-6,8-9, 11-13, 15, 17-24, 29)

In addition to standing buildings and structures, the Nevada Lucky Tiger Mill and Mine complex includes several archaeological features and isolated objects such as parts from mill machinery. Objects include a bearing cap, power shaft equipment with belt pulley wheels and a brake device, the semicollapsed remains of an Oliver filter, and a steel trough. The archaeological features include the vestiges of nine buildings or structures, along with a wall panel removed from a building at another location, a collapsed galvanized steel coal shed, a cistern, and three collapsed privies or privy pits

The Bell Family Residence (HAER No. NV-19)

The Bell Family Residence complex consists of a family residence, privies, dugout, wooden frame building, bunkhouse, chicken coop, garage, and trash concentration.

Residence (Feature C-1) (HAER No. NV-19-A, Photographs 1-2, Figure 13)

The Bell family residence is presently in the best repair of all of the structures in the area. It was constructed in phases. The central three rooms are of concrete construction. A dugout cellar was attached to the north side of this part of the structure. A later room of frame construction was added to the eastern end of the structure and an additional room of frame construction was added to the south side of this at an even later date. The house has running water and a non-working toilet. It presently contains all of the domestic artifacts necessary for daily life. Heat and cooking facilities are provided by a wood-burning range. There is no electricity.

Privies (Features C-2, 6) (HAER No-NV-19-B, Photograph 1)

The privies include: a) a wooden frame two-hole privy is still serviceable and was constructed to meet the needs of the residents of the family residence (Figure 4 and HAER Photo NV-19-B-1); and b) a one-hole

privy constructed in an "A frame" pattern and fabricated mostly of corrugated sheet metal. The building has no door since one side was left open. Its location suggests that it was constructed for the use of the occupants of the bunkhouse. It is still completely usable.

Dugout Feature C-3) (HAER No-NV-19-C, Photograph 1)

The dugout is a cement-walled structure probably intended to serve as a storage facility. It presently contains a variety of pieces of equipment associated with mining and milling operations.

Wooden Frame Building (Feature C-4) (HAER No-NV-19-D, Photograph 1)

The wooden frame building is a wooden frame structure probably used as a shop or storage facility. At present, it contains a variety of materials and artifacts associated with the domestic and work activities of the residents of the complex.

Bunkhouse (Feature C-5) (HAER No-NV-19-E, Photographs 1-3, Figure 14)

The bunkhouse is a wooden framed, seven room structure with an attached assay office (United States Department of Agriculture 1990). The eastern most room contains a wooden range and apparently served as a kitchen. A relative of the Bell family resided in this structure for a period of time. At one time, the building had an addition, identified as a "half-bath" (USDA 1990), on the south side; the addition, however, has been removed.

Chicken Coop and Garage (Features C-7, 8) (HAER No-NV-19-F, Photograph 1)

The chicken coop is a wood, sheet metal, and poultry netting structure. Not far from the chicken coop is a garage, which appears originally to have been constructed as a concrete storage building but was later enlarged into a garage by means of a wooden frame addition. At present, it houses a large, portable, gasoline powered, Ingersoll-Rand air compressor of approximately 1920s vintage; the body of a Model T, Ford; and various chemicals used in the processing of ore. The compressor is largely intact.

Archaeological Features (Features C-9)

In addition to the standing buildings, the Bell family residence complex includes a trash concentration consisting of mixed domestic and industrial refuse.

The McCormick Group Mine (HAER No. NV-20)

The McCormick Group Mine complex consists of an isolated mill machinery, an adit, platform, machine pads, retort, wooden frame building, isolated machinery, firebox, privy, building vestige, unidentified depression, and terraces. The features in the complex seem collectively to be the remains of a mercury mine, retort, and associated residential features. There is little architectural material remaining from any of these features and only moderate amounts of domestic and industrial debris. The mine and mercury extraction equipment are the most intact.

Ore Crusher and Engine (Feature P-1) (HAER No. NV-20-A, Photograph 1)

The ore crusher is a Samson, N3, Jaw Crusher manufactured by the McFarlane Company of Denver Colorado. The gasoline engine is a Chrysler L-head ("flathead") eight cylinder engine designed for use as a stationary power plant. Both pieces of equipment seem to be relatively complete and mechanically sound except for some corrosion.

Paradise Adit (Feature P-2) (HAER No. NV-20-B, Photograph 1)

The adit is the entrance to the Paradise Mine. Timbering, a few fragments of lantern glass, and some concrete fragments are the only artifacts associated with this locus.

Paradise Mill (Features P-4, 7) (HAER No. NV-20-C, Photographs 1-2)

The mill remains encompass concrete footing and piers. The concrete footing protrudes from a very steep slope. It is about twelve inches (30

cm) wide, fourteen feet (4.3 m) long, and three feet (90 cm) high. It has a heavy plank attached to most of its upper surface. Three bolts protrude from the top of the footing, and it is probable that a fourth one was present originally. The footing appears to have been a mount for a heavy piece of mill machinery, mounted very high up in the mill. Four large poured concrete piers appear to be equipment mounts. They constitute the lower end of the mill. The piers range from three feet (90 cm) to 12 feet (3.66 m) on a side and stand from one foot (30 cm) to seven feet (2.13 m) high.

Retort (Feature P-5) (HAER No. NV-20-D, Photographs 1-4, Figures 15, 16)

The retort oven is situated a short distance down slope from the ore crusher. The structure is largely intact, and except for the two pipes which make up the heating chambers and the steel door assembly, the oven seems to have been constructed on-site.

Isolated Objects and Archaeological Features (Features P-3, 6, 8-15)

In addition to the architectural and engineering features, the McCormick Group complex includes several archaeological features and isolated objects from machinery or other equipment. The object is a single 9.5 foot (2.9 m) long iron tube closed at both ends with a section of four-inch pipe extending at right angles from one end. It may be the remains of a boiler associated with a firebox. Archaeological features include what appears to be a dugout depression, a partially collapsed wooden shed built against the cliff face, two small unidentified depressions, a timber platform structure associated with the mill and probably used for dumping ore carts, a collapsed two-hole privy, a collapsed brick firebox to some sort of furnace, and the remains of residential buildings on a series of prepared terraces. One terrace contains two wooden panels, which may be the remains of tent platforms or, alternatively, panels of a collapsed structure. Another terrace is largely devoid of features and artifacts due to recent blading activities but a bunkhouse stood here originally. Finally, two terraces are associated with a variety of structural debris and domestic refuse including a collapsed wooden dugout structure, a pile of

structural wood and brick, a cluster of tent pegs and rope tighteners, bed frames, and an ice box.

II. HISTORICAL INFORMATION

"Supreme over all is silence. Discounting the cry of the occasional bird, the wailing of a pack of coyotes, silence-a great spatial silence- is pure basin and range. ...And with Nevada these high, discrete, austere new ranges begin to come in waves, range after range after north-south range, constantly in rhythm with wide flat valleys: basin, range; basin, range."

John McPhee, Basin and Range

"Desert mountains rise from the oceans of sagebrush and shadscale, across most of the Great Basin, mountains have a distinct, depauperate island character in comparison to the Sierra or Rockies on either side."

Stephen Trimble, The Sagebrush Ocean

The Buckskin National Mine site lies in the Santa Rosa Range, which begins just north the current town of Winnemucca, Nevada, and extends over sixty miles into Oregon. Elevations range from base elevations of slightly over 4,000 feet to 9,779 feet at the top of Granite Peak. More than thirty miles of the main ridge lies above 8,000 feet. Temperatures range from 90 to -30 degrees Fahrenheit during the year. More than eighty percent of the annual precipitation comes in the form of snow during the Winter months. These mountains may be typified as being "bald mountains", since they lack extensive tree cover. Only sparse groves of aspens and limber pines line the permanent stream beds. Shrub species of Western Serviceberry, Mountain Mahogany, Greenleaf Manzanita, and Buckthorn cover the mountain slopes at higher elevations. In areas lacking tree or shrub cover, sagebrush remains abundant (Trimble 1989: 160).

Geologically, most of the range is composed of thick layers of shale and sandstone which have been tightly folded and metamorphosed. Not only has the Santa Rosa Range been folded, these mountains have been carved

through the glacial activities of the last two ice ages. Quartz rich rocks, phyllites and quartzites, containing rich deposits of gold and silver ore, tend to be located on the upper strata of the metamorphic rocks. These deposits tend to be widely distributed across the Santa Rosa Range. One part of the range rich in these ores centers around Buckskin Mountain. Here, extreme folding and glaciation have left many ore bearing deposits close to the surface. Buckskin Mountain, unlike the rest of the mountains of the Santa Rosa Range, contains low level mercury deposits near its summit. These deposits are most likely the result of volcanic activities of the late Tertiary period (Wilden 1964: 122-127).

Three prevalent valleys slope from the hardscrabble area between Granite Peak and Buckskin Mountain in the Santa Rosa Mountain Range. The Little Humboldt River Valley winds to the east before it turns south and converges with the Humboldt River. To the west, the Quinn River Valley prevents the Santa Rosas from joining the Slumbering Hills. The Paradise Valley expands southerly from the Santa Rosa Range onto the deserts just to the north of Winnemucca. While other mountains of the range are higher, Buckskin Mountain historically acts as the epicenter of most of the human activities within the Santa Rosa region.

Early History

Before Anglo-Americans forayed into the area of what is now northern Nevada, bands of the Northern Paiute and Western Shoshoni peoples inhabited most of the region. As traffic along the California Trail increased in the 1850s, so did the contact and interaction between the Northern Paiutes and Anglo-Americans. Following the discovery of gold and silver in the Comstock and the Owyhee River basin, contact escalated to the level of conflict between both groups. Numerous skirmishes continued into the mid 1860s. After increased military campaigns from the United States Army, most of the Northern Paiutes gradually settled into reservation life. The Klamath Lake Treaty of 1864 and the Huntington Treaty of 1868 created reservations at the Pyramid Lake and the Walker River in Nevada and the Malheur Reservation in Oregon. Most Paiute groups settled into the reservations, but small bands of Paiutes continued to

roam much of their former territory. Following the Bannock War of 1878, the remainder of the Northern Paiutes finally settled into former and newly created reservations at Fort McDermott and Duck Valley (D'Azevedo 1986:455-459).

While there is no record of Spanish expeditions entering latter-day Humboldt County, Nevada while the area was under the control of either Spain or Mexico, the naming of the Santa Rosa seems to suggest individuals or small parties from Mexico entered the region before 1840. The Santa Rosa Mountain Range is named for Saint Rose of Lima, the first canonized saint in the New World and the most popular Saint of the Spanish Colonies of the Americas (Carlson 1974:210). Peter Skene Ogden, of the Hudson Bay Company, made the first recorded traverse of the Santa Rosa Range by an Anglo. Ogden was not an American, but a citizen of Canada. He made two expeditions through the Santa Rosa Mountains in 1828-1829 and 1829-1830 while looking for beaver pelts. After discovering the Humboldt River during his first expedition Ogden extensively explored the Santa Rosa Mountain region (Goetzmann 1966:95-97). Joseph Walker and members of the Bonneville trapping expedition were the first Americans to traverse the Humboldt River, just to the south of the Santa Rosa Range, while on their way to California in 1833 (Goetzmann 1966:151).

Two years before the Fremont expedition of 1843-1844 crossed the Great Basin, the Bidwell-Bartelson party of 1841 traversed the length of the Humboldt River. Continuous overland traffic following the Humboldt River Valley to California began in 1843 with the crossing of the Chiles-Walker Party. Both Joseph Walker and Joseph Chiles had followed the Humboldt River during their earlier crossings (Cline 1988:186-187). The Humboldt River route across Nevada became known as the California Trail.

The latter-day town of Winnemucca began as a trading post in 1853. Here, the California Trail crossed the Humboldt River at the best ford for many miles in either direction. At first, a ferry operated at the crossing, but by 1863 a toll bridge was in place. The small settlement around the bridge was first known as Gianca Bridge. By 1868, the Central Pacific Railroad reached the community and its name changed to Winnemucca, in honor of the Northern Paiute leader who resided just to the north of town. Due to

the arrival of the railroad, the town of Winnemucca quickly became the commercial and transportation center of Humboldt County. In 1873, Winnemucca became the county seat of Humboldt County (Smith *et al.*:1983:74-75).

The Santa Rosa Mountain Region

Following the discovery of silver in the Comstock region in 1859, miners began exploring every mountain range in the future State of Nevada. The Santa Rosa Range was no exception. Miners probed the valleys of the Santa Rosa Mountain Range in their quest for precious metals. By June of 1863, miners found silver ore along Rebel Creek in the north end of the Paradise Valley. Quickly, the mining communities of Spring City, Bullion, Centerville, and Quartz Hill sprang up at the base of the Hot Springs Mountain Range on the east side of the valley. While most miners searched for precious metals, several miners began to mine coal in the Paradise Valley. Since timber for fuel was in short supply, many miners used coal as fuel for their ore reduction processes (Purser 1987:15, 16, and 54). The State of Nevada organized the miners of Paradise Valley into a mining district in 1873 (Lincoln 1923:101).

In June of 1863, miner W.B. Huff looked upon the lands to the south of the Santa Rosa Range and noticed the oasis like qualities of the valley below him. He quickly compared the valley to the surrounding desert and exclaimed, "what a paradise." To this date, this valley has been known as the Paradise Valley (Carlson 1974:187). Settlement of the Paradise Valley began immediately after the discovery of silver ore in the Rebel Creek region at the north end of the valley in 1863. Most of the valley received greater amounts of annual precipitation when compared to the arid lands to the south between the Santa Rosa Range and the Humboldt River. Native hay readily grew in the Paradise Valley and the nearby Little Humboldt Valley. This provided a feed source for intravalley livestock production and for sale to the mining camps of northern Nevada. In addition to native grasses, wheat and barley grew well in the soils of the valley. During the 1860's, Anglo-Americans steadily settled agricultural lands of the valley.

Members of the Northern Paiutes continued to traverse the Santa Rosa Mountains and occasionally steal livestock from the Paradise Valley ranches throughout the 1860s. The U.S. Cavalry established a small post, Fort Winfield Scott, on the west side of the valley. After the Army's presence eventually curtailed the raids of the Paiutes, Anglo settlement of the valley rapidly increased. By the early 1870s, the nucleus of the town of Paradise City developed around the ford of Cottonwood Creek. As livestock and grain production increased, the town became the valley's commercial center. Paradise City served both the mining and agricultural economies within the valley. But as mining began to wane in importance after 1880, the town increasingly became an agricultural center. Paradise Valley had to depend upon county roads for transportation after Valley residents failed to encourage officials of the Central Pacific Railroad to construct a spur line into the valley. The town remained the center of economic activities in the valley until after 1910, when the economic center of the region shifted to Winnemucca (Purser 1987:17-228, and 217-220).

Anglo-Americans began settling the Quinn River valley in 1866. That year, miners began to extract mercury in the Opalite area just south of the Oregon State line. The United States Cavalry established a military camp in early 1865 as part of northern Nevada chain of military outposts guarding against raids from the Northern Paiutes. This post later was renamed Fort McDermott in honor of the camp commander who was killed in a skirmish with the Paiutes (Carlson 1974:160). After 1871, the lower Quinn Valley became heavily grazed by large flocks of sheep. The largest flocks in the state would be located in the Quinn Valley by 1880. Gradually, the range in the Quinn River Valley became privatized and much of the livestock production shifted to cattle. Ranches based in the Quinn River Valley along with ranches from the Paradise Valley ran numerous seasonal line camps in the Santa Rosa Mountain Range. Residents of the southern end of the Quinn River Valley established the town of Oroville in 1918 to serve as a local commercial center (Smith *et al.* 1983:100-105; Carlson 1974:183).

In 1907, acting on a tip and having an automobile to transport him to the Santa Rosa Mountain Range, Jesse Workman discovered mining claims on a mountain which would eventually yield almost eight million dollars in

thirteen years. Ores from the National Mine were ores of electrum, an alloy of gold and silver. Most of the ore from the National mines was composed of high concentrations of electrum, sometimes in nearly pure form. This ore ranged in value between \$30.00 to \$90.00 dollars per pound. Ironically, almost as much ore which was legitimately produced by the National Mine was stolen, or "highgraded," by company employees (Schreier 1981:87).

Workman and his partner, Lew Davis, developed thirty-four claims on the north side of Charleston Hill in the Three Mile Creek drainage. Lacking the resources and ability, they chose to lease the mining claims to any person willing to work the ground and pay royalties for any ore mined. The leasing of mine claims was popular in the mining camps of Tonopah and Goldfield. Workman and Davis and their major lessors, the Stall brothers, were gradually excluded from taking part in the riches of the National mines through numerous litigations. The National Mine continued to produce high-grade ore until 1921 when the rich veins of Charleston Hill finally played out (Schreier 1981:3-4, 20, 36, 67, 82, and 131-137). Miners of the Santa Rosas hoped the veins of high-grade ores might be found elsewhere in the region.

Immediately following the discovery of rich ores at the National mine site, miners organized the National Mining District. This district is located on the western slope of the Santa Rosa Range and comprises most of the area between the Paradise Valley and McDermott. Included at the south end of the district are the mining claims on the north and eastern face of Buckskin Mountain (Lincoln 1923:100).

Buckskin Mountain

The first recorded event of prospecting on Buckskin Mountain took place in the early 1890s. Two prospectors from Idaho camped near a spring on the south slope of Buckskin Mountain. On the following morning, one fellow went searching for minerals while his partner packed. He found samples of what might be high-grade ore, but they delayed in getting the ore assayed until several months later when they stopped in Paradise Valley.

Though they took only a small sample of ore to be assayed, the value of the sample was calculated to be worth more than \$16,000 per ton. The prospectors immediately returned to Buckskin Mountain, but they were unable to find the ledge where they originally located the ore. This has become known as the Lost Buckskin Mine (McDonald 1981:85-86).

Nevada State Senator William J. Bell and his partner George Ward began locating mining claims on the east face of Buckskin Mountain in the Fall of 1905. This preceded the discovery of mining claims at National by two years. Bell and Ward established four claims, all named for Senator Bell's twin sons Normand and Ormand Bell. Both Bell and Ward began working the claims in the next year assisted by Senator Bells' eldest son, Forrest. Having recently completed a degree in mining engineering from the University of Nevada at Reno, Forrest Bell was a valuable asset of their search for precious metals. The three continued working the claims over the next four years. In late 1909, they filed for five more claims adjacent to the original four. The claims had the potential for bearing gold and silver since numerous quartzite ledges were exposed on the surface (Nevada Bureau of Mines and Geology 1964:126). Assays of minerals from the claims resulted in value of \$20 per ton. In late July of 1910, there was the first strike at the Bell property. By the time of the second strike in June of 1912, the Bells had opened two tunnels into the mountainside. Some of the ore found was similar to the high-grade electrum ore from the National Mines (*Humboldt Star*, July 27, 1910, and *National Miner*, June 11, 1912).

At the end of 1912, George Ward ended his association with the Bell family and left for the Golconda mining district. Forest Bell assumed responsibility for running the mine on Buckskin Mountain. By Summer of 1912 each of the two tunnels at the mine ran more than 200 feet in the mountain and had contained numerous winzes. The gold ore found appeared in well defined veins, but was very fine and floury. Assays on the ore returned values of more than \$50 per ton (*National Miner*, August 16, 1912). Between 1913 and 1921, the Bells added four additional mining claims to their group on Buckskin Mountain. Table 1 provides a tabulation of Bell claims on Buckskin National Site (*Humboldt County Registrar's Office n.d.*).

Table 1. Bell Claims on Buckskin National Site
(Humboldt County Registrar's Office n.d.).

NAME OF CLAIM	DATE OF LOCATION
Normand Bell #1	11/15/05
Normand Bell #2	11/15/05
Ormand Bell #1	11/15/05
Ormand Bell #2	11/15/05
Rattler #1	10/08/09
Buick	10/08/09
Finis	10/17/09
Rambler	10/25/09
Rattler #2	11/08/09
Sylvanite	9/27/13
Hudson	6/27/17
Reo	6/27/17
Maxwell	7/01/21

In February of 1912, the Bell family incorporated their holdings on Buckskin Mountain into the Buckskin National Gold Mining Company. The company issued 1,250,000 shares of stock valued at \$1.00 per share of which 300,000 issues were placed on reserve. Residents of the town of Paradise Valley were especially eager to buy stock since five town residents worked at the mine. In January of 1914, the Buckskin National Gold Mining Company issued the sale of an additional 250,000 shares at \$.50 per share (National Miner February 9, 1912, and Humboldt Star January 11, 1914). Company records were unclear if the stock sold at the market value (Buckskin National Gold Mining Company Records n.d.). The members of the Bell family held the majority of the stock. One of the most colorful stock holders of the Buckskin National Mines was George Wingfield. Wingfield had become rich from mining investments in the Goldfield area and had the money to invest in additional mining ventures (Oral interview F. Bell, Jr., August 5-6, 1993). Senator Bell had once employed George Wingfield as a bartender when both lived in Winnemucca earlier in the century (Bell 1992:172-174).

Within two years of incorporating, the Buckskin National Gold Mining Company began to lease their claims in a similar fashion as the mines of Tonopah and Goldfield. Initially, members of the Bell family leased the mines from the corporation. Legality required family members to sign leases with the Buckskin National Gold Mining Company since many of the corporation's shareholders were outside of the family. While members of the Bell family leased the mines from 1912 to 1914 a considerable amount of high-grade ore was mined from the number two tunnel. The Hatch Mining Company of National, Nevada leased the mines from 1914 until 1916. Most of their work took place in the number one tunnel, later called the Hatch adit, and a new adit to the north called the Halcyon mine. The number two tunnel was unused during this time since it was located in soft rock which often collapsed upon the adit. The Halcyon mine was located at a lower level to the north. Here, miners hoped to connect with the main ore body descending through the mountain side (Buckskin National Gold Mining Company records n.d.).

After the Hatch mining company gave up their lease at Buckskin Mountain, there were three major adits at the mine site. The South or number two adit extended back almost 900 feet into the mountain and had three levels, each with two drifts. The Hatch Adit went 800 feet into the mountain and descended to three levels. The Halcyon mine bored over 1,300 feet into Buckskin Mountain and contained four drifts along the primary ore body. Most of the ore extracted from the Buckskin Mines assayed at over \$40.00 per ton, but without an on site milling facility high transportation costs made ore mining unfeasible. In between leases with outside mining companies, members of the Bell family would continue "chloriding" the mine. Chloriding is a miner's term describing the mining of high-grade ores where the ores exist in small pockets of gold-silver-lead chlorides. From 1916 to 1923, Forrest and Vernon Bell chlorided much of the Halcyon mine area (Buckskin National Gold Mining Company records n.d., and oral interview F. Bell, Jr., August 5-6, 1993).

Beginning in 1923, the California National Gold mining Company leased the mines from the Buckskin National Gold Mining Company. In order to make the venture profitable, the California National Installed a fifty ton flotation milling plant on site. The flotation process entails making the

finely ground ores into a watery pulp and then mixing the pulp with pine oil. After agitating the mixture the ores "float" to the top of the solution by attaching themselves to the lighter sulphides. The float is quickly removed and filtered. Drying the filtered material yields the gold and silver ores (Austin 1926:121-122). The California National Gold Mining Company leased the mines until 1928 when financial matters forced them to loose their lease. Flotation milling techniques are not very successful in removing a large percentage of precious metals from ore. Usually less than fifty percent of the silver or gold present is removed by this method. There are records of the Buckskin National Gold Mining Company in which an independent mining consultant named Thomas Thompson advised the California National Gold Mining Company to install a cyanide based mill to extract the ore. Cyanide leaching can remove as much as ninety-seven percent of the gold and silver. The California National failed to follow Thompson's advice and installed the flotation mill since the flotation method cost less. The California National sold most of the milling machinery to other mining interests after it vacated the Buckskin mines (Buckskin National Mining Company records n.d.).

With the exception of Bell family members chloriding the Buckskin mines from 1928 to 1931, there were few large scale mining activities going on at Buckskin. In May of 1931, The Nevada Lucky Tiger Mining Company began discussions with the Buckskin National Gold mining Company to purchase the Buckskin Mountain mining claims. After a year of discussions the Nevada Lucky Tiger Mining Company failed to purchase the claims. In the end the Nevada Lucky Tiger Mining Company did lease the mine site. Immediately they converted the old flotation mill into a fifty ton cyanide plant with a special ten ton flotation and washing plant. Cyanide milling was developed in the last decade of the Nineteenth Century to remove gold and silver from ores of low concentrations. Finely ground ores are mixed and agitated with solutions of cyanide. After thickening, the solution settles in a pregnant solution and is eventually filtered. Finally, the filtrate is roasted to remove any additional impurities leaving the metals in bullion form (Dorr 1936:113-139).

The Nevada Lucky Tiger Mining Company operated the Buckskin mines full-time from 1935 to 1937. On August 3, 1937, a fire broke out in the cyanide mill leaving it completely destroyed. Losses at the mill ran as

high as \$200,000. Investigations into the cause of the fire point to a gasoline engine causing the fire. However, Mr. Forrest (Woodie) Bell, Jr. believes the mill may have been destroyed by arson. The bookkeeper of the mill may have started the fire to destroy all records of his embezzlement of company funds. Mr. Bell tells his father's story of the bookkeeper running out of the mill into the tailings piles just as the mill caught fire. The Nevada Lucky Tiger Mining Company refused to reinvest in a new mill for the mine site and by January of 1938 they let go of their lease of the facility. Unable to find a new tenant, the Buckskin National Gold Mining Company leased the adits to numerous individual miners until 1941. From 1938 to 1941, these miners removed 34,500 tons of ore hoping to find hidden pockets of high-grade. By 1940, the average assay of the Buckskin mine ores was less than \$20.00 per ton. The Buckskin National Mine finally closed by orders of the War Production Board in 1943. After the War, Forrest Bell and his son Woodie continued small scale mining at the newly dug Teacup adit to the south of the old mill-site. They hoped to find the rich Bell vein which runs beneath most of Buckskin Mountain. After 1948, members of the Bell family gave up mining the claims and have since leased the mines to ASARCO and Queenstake Mining Companies (Buckskin National Gold Mining Company records n.d., and oral interview F. Bell, Jr., August 5-6, 1993). Figure 3 is the flow sheet of the Nevada Lucky Tiger Mill.

Chalmers McCormick, the manager of the Utah Construction Company Ranches in the Quinn River Valley, claimed the quicksilver deposits on the top of Buckskin Mountain. He was prospecting for gold and silver in the 1920s, but instead found cinnabar deposits. Area miners knew cinnabar existed on the mountain, but the low grades of the ore prevented commercial mining from taking place. McCormick found traces of mercury on the slopes of the summit and later traced it to the source. At the source he found sinter bearing enough ore to make recovery of the mercury viable. McCormick and John Dermody laid claim to the deposits on top of Buckskin Mountain between 1925 and 1929. Up to 1929, fifty-eight flasks of Mercury had been produced at the site (Roberts 1940:122-125, and Whitney 1939:2-5).

The McCormick and Dermody claims, collectively known as the McCormick Group, were optioned to Clarence Hall late in 1939. Hall constructed a

thirty ton rotary furnace on the site and mined almost 3,000 tons of cinnabar ore. Hall recovered only fifty flasks of mercury from the ore. The second phase of development quicksilver mining on Buckskin Peak quickly ended. In 1960, the Paradise Quicksilver Company obtained title to the claims and conducted exploratory work in cinnabar mining. Employees of the Paradise Quicksilver Company constructed a small retort furnace near the summit of Buckskin Peak, however no records exist regarding their results (Hamilton 1992:11).

Projections of the Buckskin Experience

Buckskin Mountain is an isolated place. From Buckskin Mountain it is almost fourteen miles to the nearest paved road. The closest community is Paradise Valley. This is reached by traveling more than twenty miles down gravel mountain roads. McDermott, Nevada is located thirteen miles to the north after intersecting the paved road in the Quinn River Valley. Winnemucca, the closest major commercial center, is sixty miles to the south.

Winters arrive by the middle of November, and leave the mines of Buckskin Mountain isolated until early May of the following year. Mining at the Buckskin National Mines never followed seasonal operations; the mines were continually worked throughout the year. Usually, enough supplies would be stockpiled at the mine site to get the members of the Bell family and mine employees through the long winter. Very few people arrived during the winter months and those people living on Buckskin Mountain rarely left. Forrest Bell, Jr. remembers stories of his father traveling on foot more than seventeen miles to the Utah Construction ranches along the Quinn River Valley during the dead of winter to pick up the mail. He would return the next day along the same route (Oral interview F. Bell, Jr., August 5-6, 1993)

While the mines at Buckskin Mountain maintained close contact with the town of Paradise Valley, the site was oriented socially and economically with the Quinn River Valley and the town of Winnemucca. Members of the Bell family occasionally visited the town and interacted with the residents of the Valley. William Bell, father to Forrest and Vernon Bell,

prospected in the Paradise Valley in the late 1890's (Bell 1992:33). Occasionally, supplies would come from the town of National while it was in operation, but most supplies would be purchased in Winnemucca and shipped to the Buckskin National Mines (Buckskin National Gold Mining Company records n.d., and oral interview F. Bell, Jr., August 5-6, 1993). Records of the Buckskin National Gold Mining Company show few purchases of supplies from the town of Paradise Valley. In 1909, Paradise valley residents were willing to begin construction of an improved road from the town to the Buckskin mines and to the town of National hoping to connect the mines of Buckskin and National with the agricultural valley of Paradise (*Humboldt Star*, November 20, 1909).

Early roads in Humboldt County ran in two directions: the emigrant road followed the Humboldt River and a second road extended north from Winnemucca to the Quinn River Valley and the Oregon settlements to the north of McDermott. The road north from Winnemucca became known as the old Idaho road (Bragg 1905:35). Goods and people were transported up this route from Winnemucca to the Paradise Hill station later transferred to connecting lines to the Paradise Valley or to the settlements of the Quinn River Valley. The Paradise Hill station provided the main source of water for teams traveling north from Winnemucca. Teamsters drove freight via wagon north from Winnemucca until the 1920's when trucks and automobiles became the primary mode of transportation. By 1925, deliveries to Buckskin National Mines were done by freight truck. The truck would arrive monthly delivering freight and would transport the high-grade ore to Winnemucca for rail shipment to processing mills in Salt Lake City, Utah. Often, the delivery truck would have to make numerous trips to the Buckskin National mines to transfer all the mined high-grade for shipment (Bell 1980:16). Large items continued to be transported via team and wagon to the Santa Rosa Mountains until the 1940s (Bell 1980:35-36, Purser 1987:215-217, and Buckskin National Gold Mining Company records n.d.). Materials for the new cyanide mill were shipped from Winnemucca via freight teams. The freight wagons continued up the Quinn River Valley and Canyon Creek to the transfer station. At the transfer station, goods and machinery bound for the Buckskin National Mines were transferred to four-team horse wagons so they could be carried up the steep grade of Windy Gap (Oral interview F. Bell August 5-6, 1993).

Initially, the mining operations at Buckskin Mountain were limited to members of the Bell family and George Ward. After 1910, outsiders were hired to assist with mining the claims. Once leasing began at the mine site, members of the Bell family observed the lessors to insure the Buckskin National Gold Mining Company would receive proper royalties from ores mined at the site. For instance, Forrest Bell maintained constant vigilance over both the assaying and milling of the California National Gold Mining Company and the Nevada Lucky Tiger Gold Mining Corporation when they respectively leased the mines from 1923-1928 and 1931-1938. Forrest and Vernon Bell chlorided the site when it was not being leased to outside companies (Buckskin National Gold Mining Company records n.d., and oral interview F. Bell, Jr., August 5-6, 1993).

Members of the Bell family resided away from the mine site on Buckskin Mountain. They maintained a homestead almost a mile to the south overlooking the hardscrabble area between Buckskin Mountain and Hinkey Summit. Miners and employees of the companies leasing the buckskin mines resided immediately downhill from the Hatch Adit. A small community sprang up while the Hatch company leased the site. Employees of subsequent lessors resided in the Buckskin community during the duration of their employment.

Adjacent to the mill at the highest level of the community were the company offices, assay offices and residences for company officials. The second tier of buildings contained shops, coal and fuel sheds, and equipment storage sheds. Just below the storage area were the bunk houses and the dining commissary. Unmarried men lived in the bunk house. It is possible during times of high employment single men and married men away from their families might sleep in the dining commissary. Residences for married employees and their families were scattered downhill from the bunk house. Company records from the Buckskin National Gold Mining Company are unclear which entity ran the community. Large numbers of records of accounts with Winnemucca mercantile stores tend to support the belief the Buckskin National Gold Mining Company ran the bunkhouse and the dining commissary while the mines were leased to outside mining companies. At the height of ore production from the Buckskin mines, the almost one hundred employees in various capacities

worked at the mine and the mill. Names on the employment list include Italian, Irish, Basque, English, and some Cornish names. It is unclear if Blacks were employed at the mines since it is impossible to distinguish skin pigment from an individual's name. The presence of Blacks at the mines seems unlikely since there was a high degree of racial prejudice against Blacks in the West and many employers were hesitant to integrate their work forces with either African-Americans or Hispanic-Americans (Buckskin National Gold Mining Company records n.d., and oral interview F. Bell, Jr., August 5-6, 1993).

Perhaps, the best case study of living at the Buckskin National Mine site comes from Laura Webb Bell. Laura was raised on a farm in California and eventually attended college to study journalism. The pursuit of her career brought her to Winnemucca where she met and later married Vernon "Dutch" Bell. Shortly after becoming married, they set out to live the next year on Buckskin Mountain. Over the next year she "shared his risks" by watching him descend daily into the mine. Life on Buckskin Mountain was something of an anomaly for her; it was unlike her life growing up on a California farm or going to college at Stanford. Laura quickly adjusted to the worries of being a miner's wife and to the isolation of Buckskin Mountain. Laura and her husband, Vernon, came to depend upon each other very much for both friendship and support. Often the only other people Laura would interact with were the two other miners at the mine, Forrest Bell and Harold Hager, who chlorided high-grade ore with her husband. Her only female companionship during that year came from Kathleen Hager. She would spend the summers at Buckskin to be with her husband. These four people comprised her associations for most of the year except for an occasional buckaroo who would wander up the mountain searching for lost cattle. Laura did adjust to the isolation and come to like her life on Buckskin Mountain much in the same way she would add an additional quarter-cup of flour to her breads to make them rise in the 8000 feet of altitude on Buckskin Mountain (Bell 1992: 67-74, 121-128).

Currently, the Buckskin National Gold Mining Company owns the ten major claims around the former mill and mine sites on Buckskin Mountain. The claims to the extreme south end of the property where the Bell family cabin is located are owned by Mr. Forrest (Woodie) Bell, Jr. These claims in addition to ninety-five additional unpatented lode claims owned by the

Buckskin National Gold Mining Company were leased to ASARCO Gold Mining Company in 1968. ASARCO took on Queenstake Resources in a joint venture lease of the claims on Buckskin Mountain beginning in 1986 (Hamilton 1992:17). During the period of intensive mining activities at the Buckskin National mines from 1914 to 1947, the mines produced approximately \$3,000,000 worth of gold and silver metals (Department of Agriculture 1991:6).

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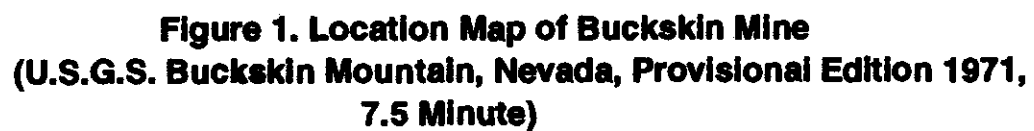
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IV. PROJECT INFORMATION

Recent studies identified hazardous wastes at the site of the Buckskin National Gold Mine and the McCormick Group Quicksilver Mine in Humboldt County, Nevada (26 HU 3200) (Batelle Memorial Institute 1991). Soils in the vicinity of the McCormick Group mine contain high levels of mercury. Acidic ground water discharging from the Buckskin National Mine is leaching a number of contaminants from a mill tailings pile, and draining into the North Fork of the Little Humboldt River (Batelle Memorial Institute 1991). A number of measures have been proposed to correct these situations (U.S. Department of Agriculture 1993). Both of these sites, however, contain cultural resources that include the archaeological and architectural remains of mines, mills, and residences. Section 106 of the National Historic Preservation Act requires that the impacts of the proposed hazardous waste clean up upon cultural resources be taken into account.

Dr. Donald L. Hardesty, Department of Anthropology, University of Nevada, Reno, was the Principal Investigator of the project. Richard A. Goddard served as Project Director and Stephen Pettit as Project historian. The photographer was Larry Kingsbury of the U.S. Forest Service. This documentation is based on a previous investigation conducted by the University of Nevada, Reno, reported in *National Register Evaluation of the Buckskin National Mine and McCormick Group* (1993).

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**Figure 2. Nevada Lucky Tiger Mill, No Date (Courtesy Nevada
Historical Society, Photograph Humboldt 57)**



Figure 3. Nevada Lucky Tiger Mill, 1952 (Courtesy Nevada Historical Society, Photograph Humboldt 58)



Figure 4. Buckskin Mine, 1938 (Courtesy Nevada Historical Society)



Figure 5. Buckskin Mine, 1938 (Courtesy Nevada Historical Society)

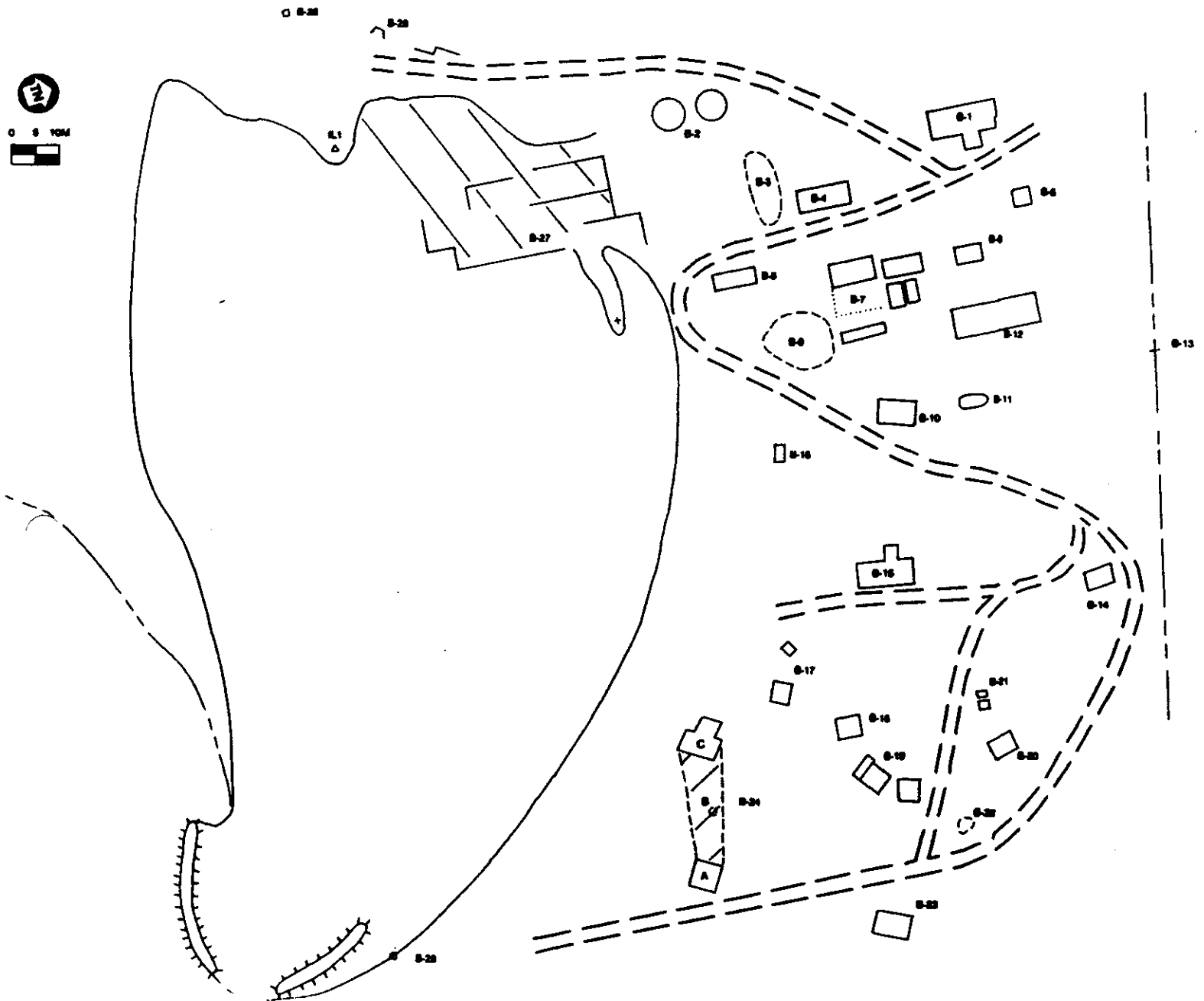


Figure 6. Planview of Nevada Lucky Tiger Mill Complex

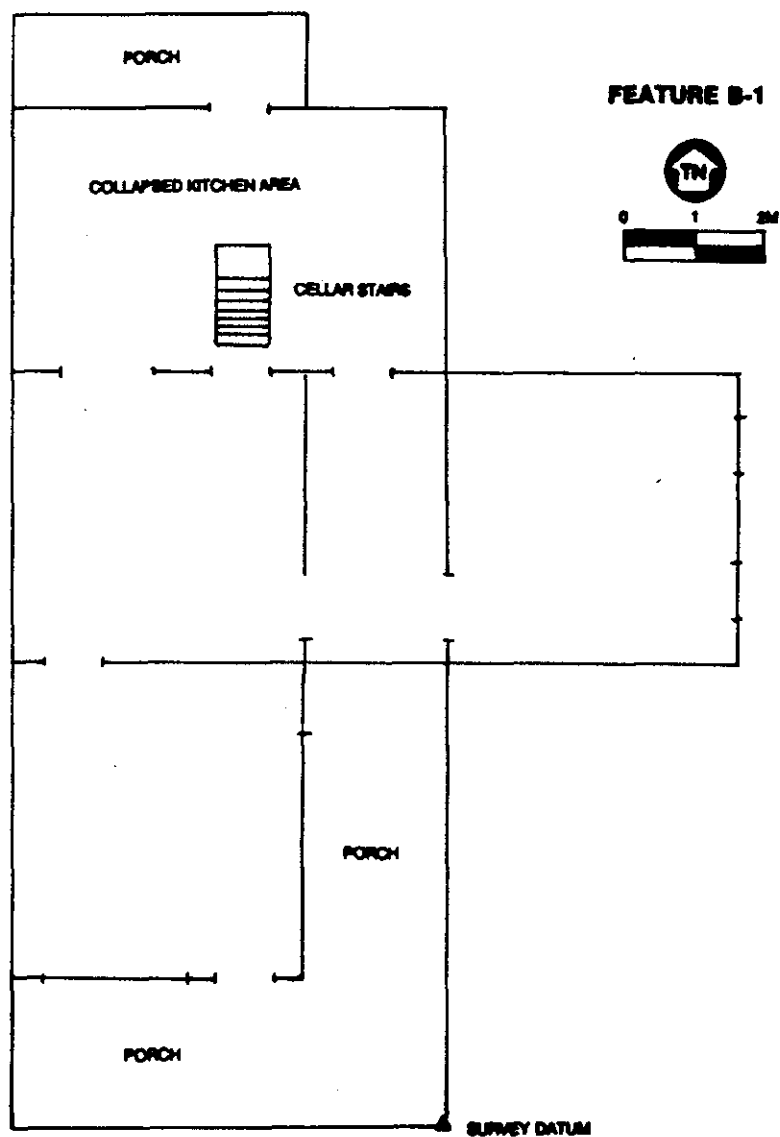
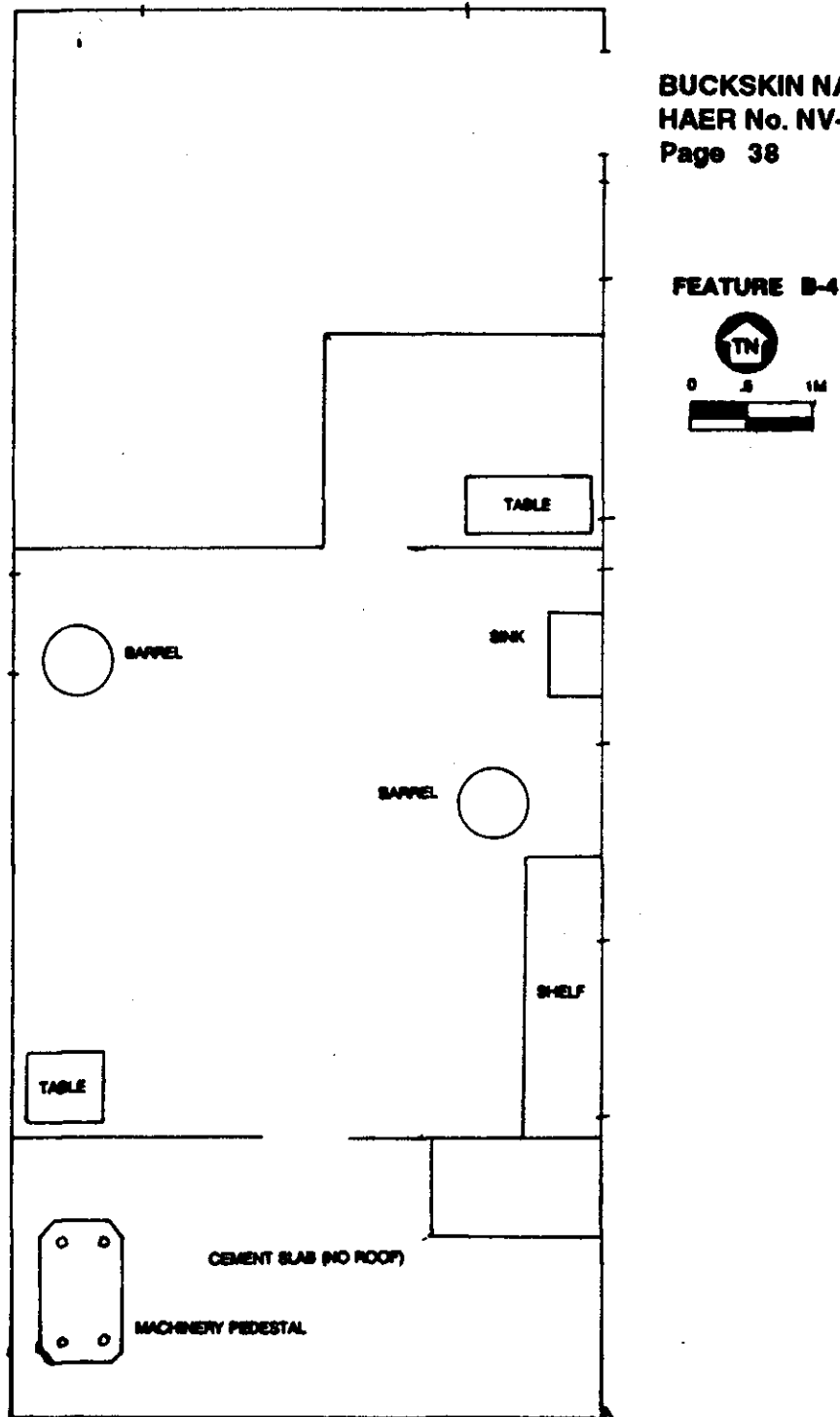


Figure 7. Planview of Office (Feature B-1) at Nevada Lucky Tiger Mill Complex



**Figure 8. Planview of Assay Office (Feature B-4) at Nevada
Lucky Tiger Mill Complex**

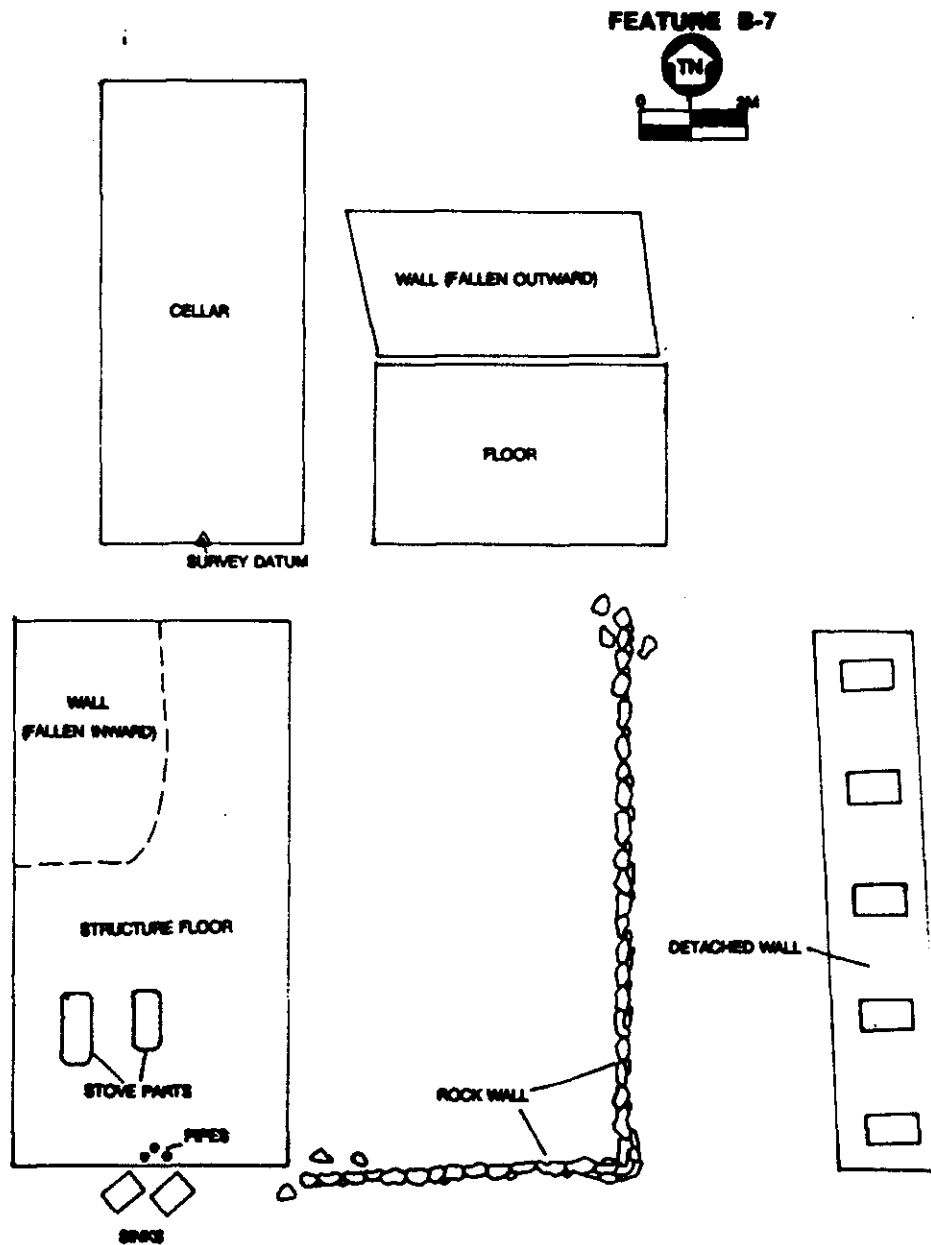


Figure 9. Planview of Dining Hall (Feature B-7) at Nevada Lucky Tiger Mill Complex

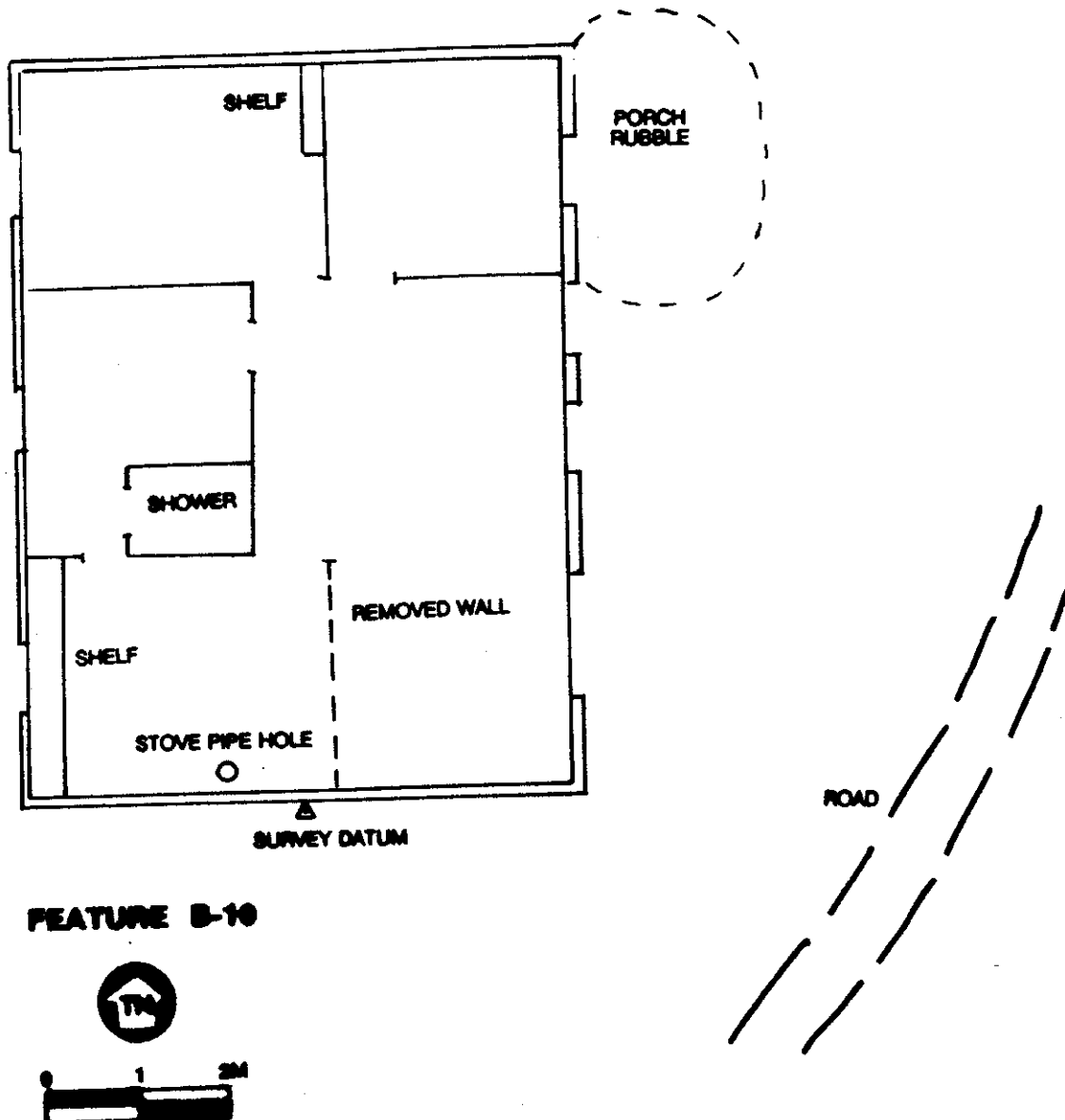


Figure 10. Planview of Family Residence (Feature B-10) at Nevada Lucky Tiger Mill Complex

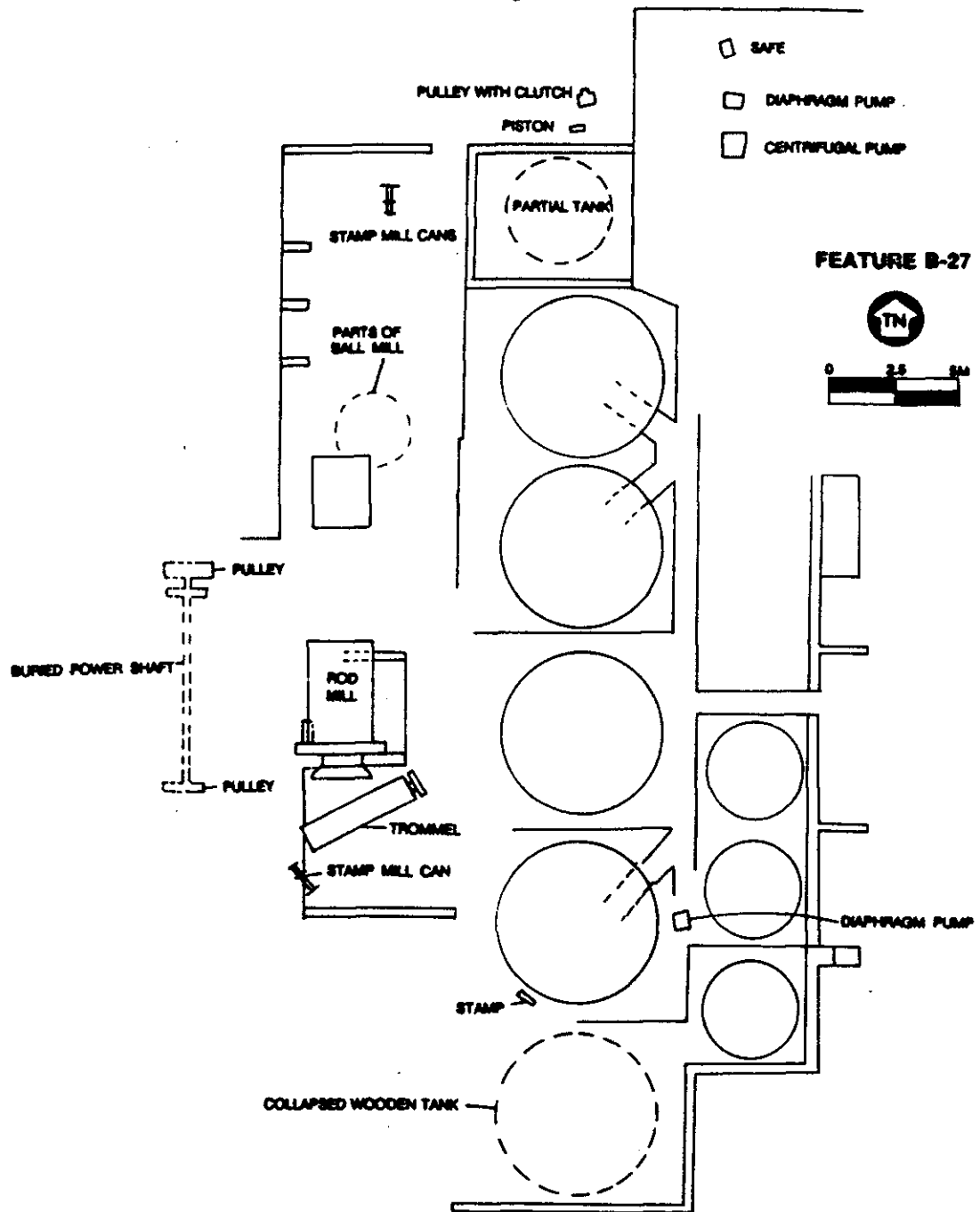


Figure 11. Planview of Mill (Feature B-27) at Nevada Lucky Tiger Mill Complex



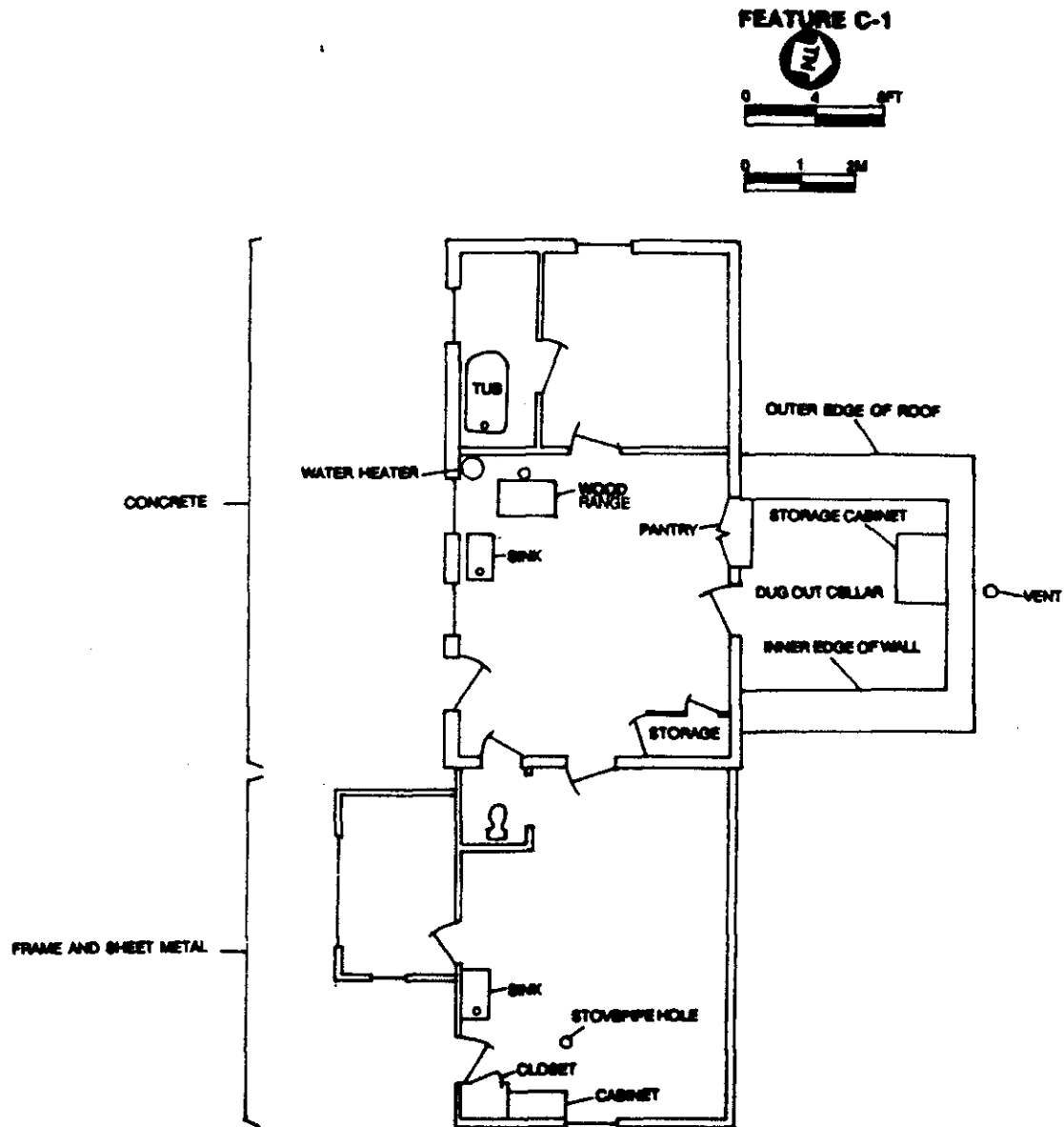


Figure 13. Planview of Family Residence (Feature C-1) at Bell Family Complex

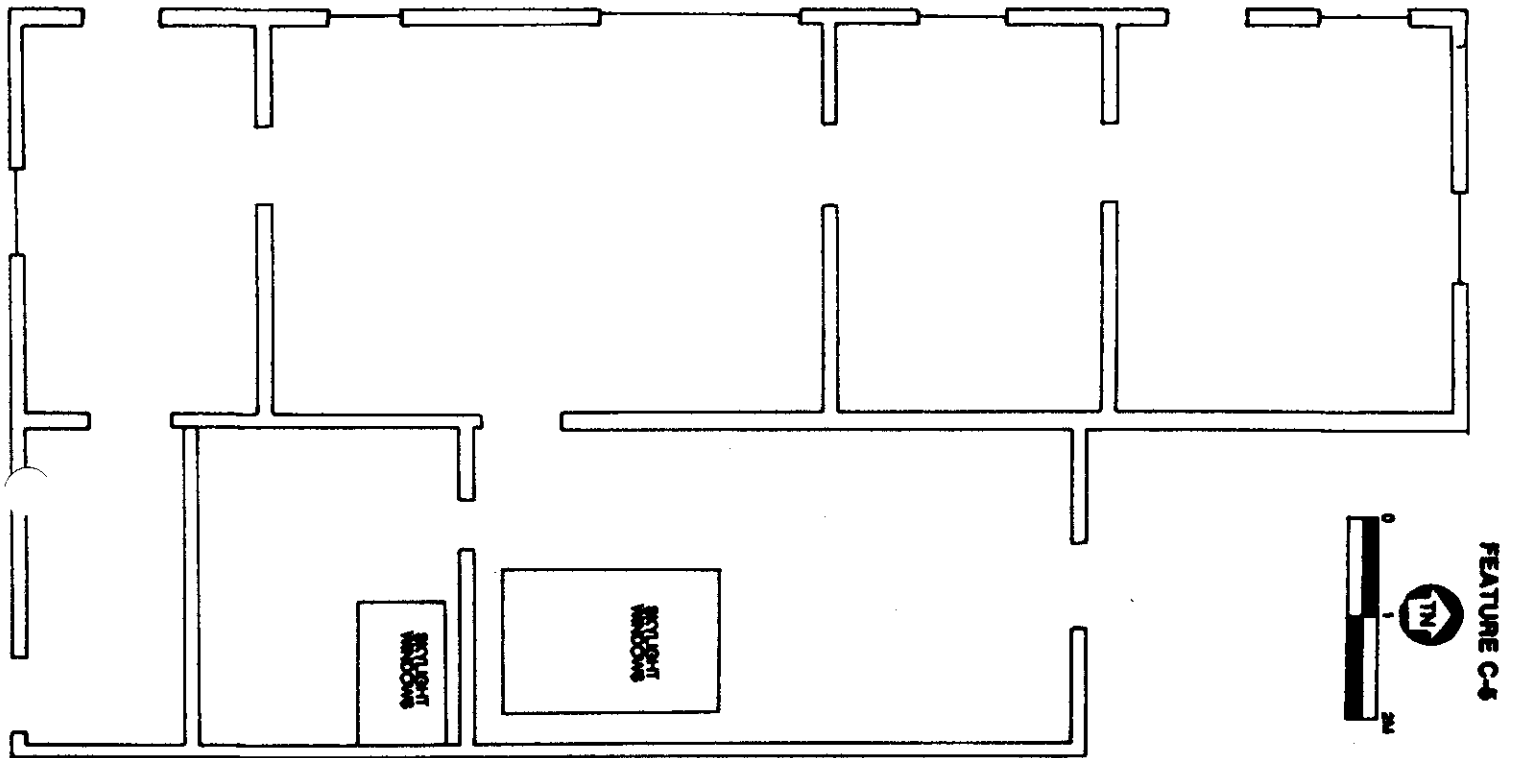


Figure 14. Plan View of Bunkhouse (Feature C-1) at Bell Family Complex

FEATURE P-5

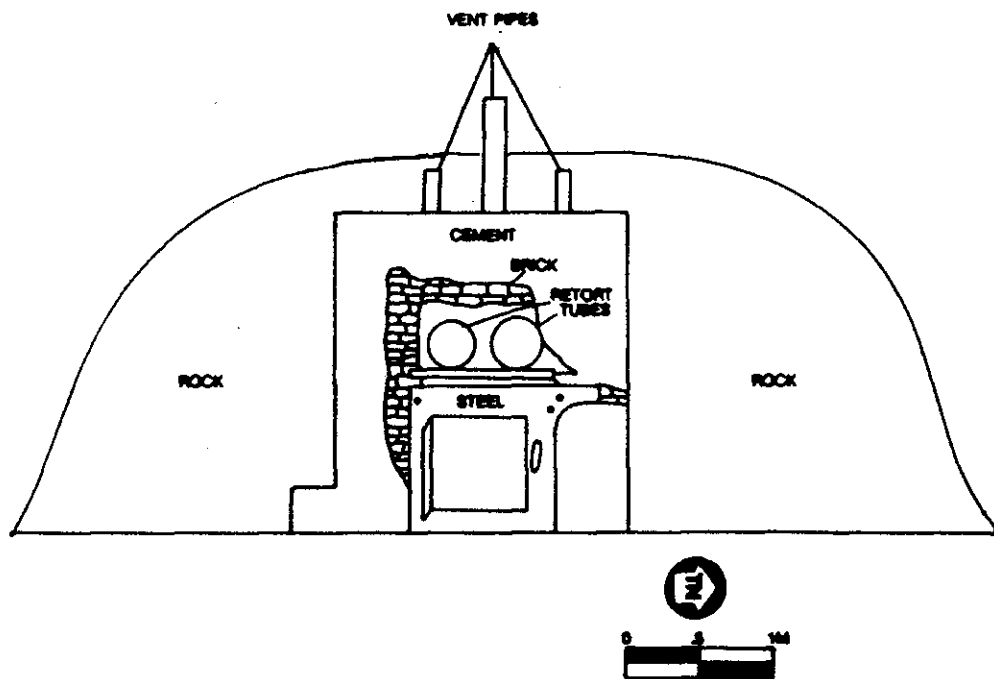


Figure 15. Elevation of Retort (Feature P-5) at McCormick Group Mine Complex

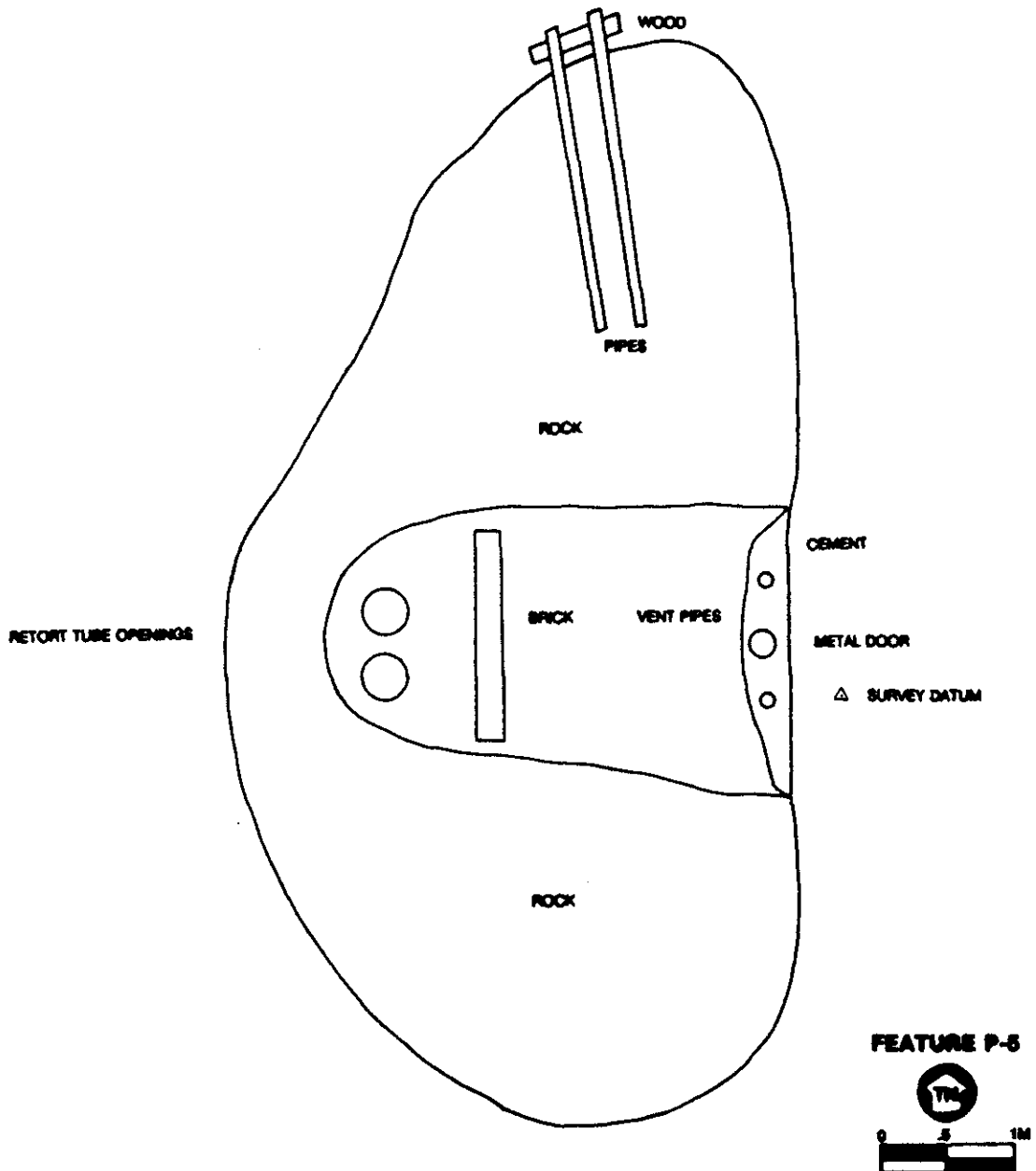


Figure 16. Plan View of Retort (Feature P-5) at McCormick Group Mine Complex

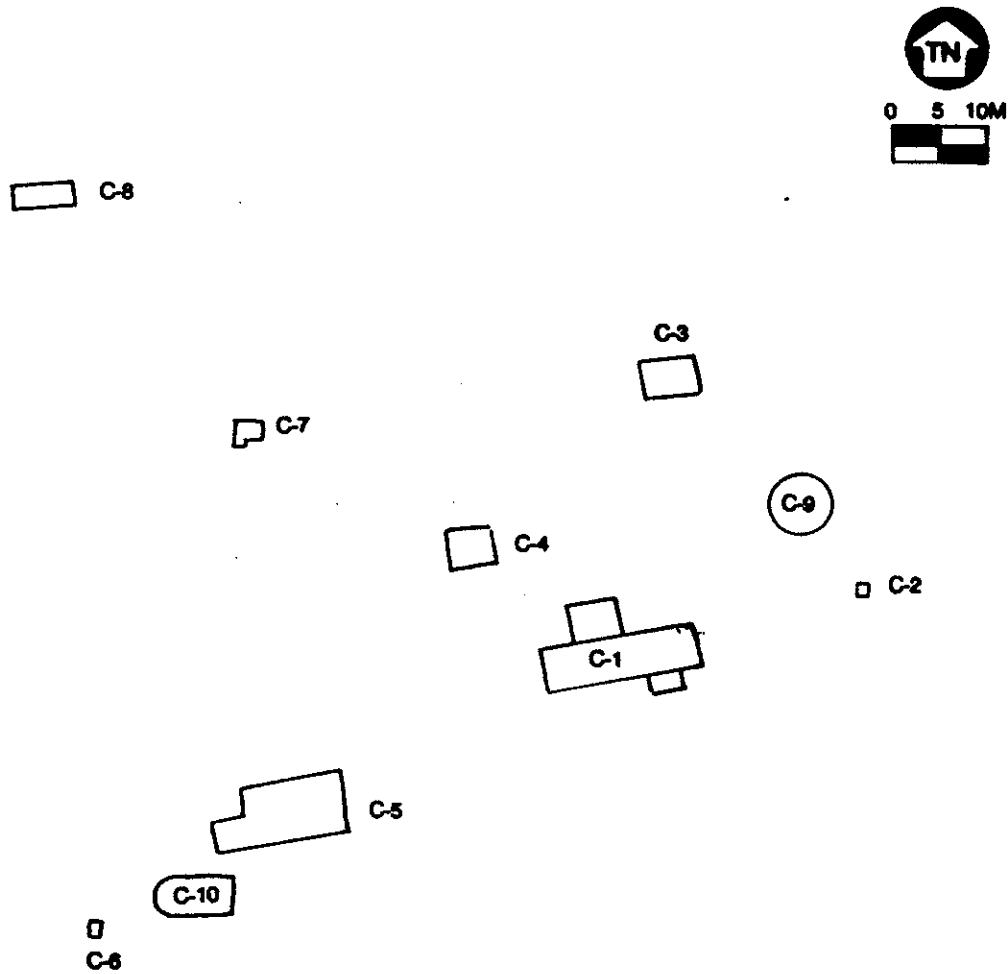


Figure 17. Plan View of Bell Family Residence Complex

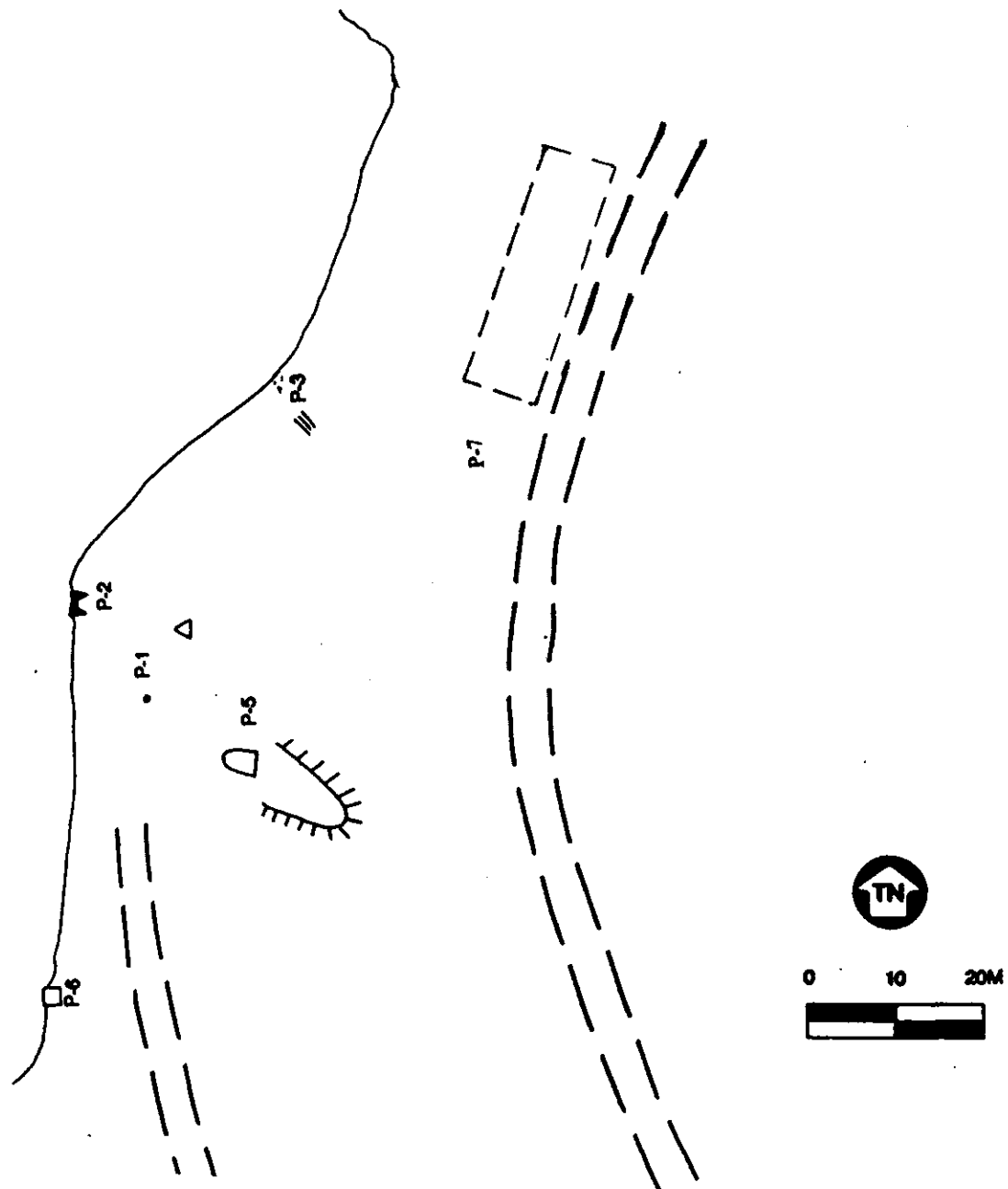


Figure 18. Plan View of McCormick Group Complex